Chapter 14
Deployment, Reenlistment Intentions, and Actual Reenlistment: Single and Married Active-Component Service Members

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Abstract The question of how military deployments affect the decision of whether or not to reenlist has received considerable interest from policymakers and researchers. An important yet relatively unexplored dimension to this issue is how the impact of deployment on reenlistment differs by marital status. This chapter develops a conceptual framework for explaining why the response to deployment might differ and then examines the response empirically. We find that the effect of deployment is typically positive, and that this effect is larger for married members. A notable exception occurs in the Army in 2006 and 2007, where we find sizable negative effects for marrieds and singles. A chief driver of the difference may be selection into marriage; military personnel who marry arguably reveal a relatively strong attachment to military life, which may be positively correlated with resiliency to the stress and risk associated with deployments.

Introduction

Approximately 15% of Active Component enlisted personnel enter the service married, and nearly 50% are married by the end of the first term. Married service members have an immediate source of social and emotional support in their spouse, but during an era of high deployment the regimen of military life and its demands on the time and commitment of the service member may fray the couple's relationship. Added to this, actual deployment overseas exposes the member to a variety of dangers, constrains communication back home, places much of the burden of maintaining the couple's household on the spouse, and generally can generate stress and anxiety for the couple. Single service members have a network of friends and family and may have people with whom they are close. These relationships, too, may be a source of support and yet may be strained by deployment.

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Although the stresses deployments place on a relationship may manifest themselves in myriad ways, clearly a central dimension is whether service members decide to remain in the military, where they are subject to further risk of deployment. Despite the apparent difference in the social/emotional support structure of single and married service members as well as the seemingly greater potential for the propagation of stress and anxiety in a couple, previous studies of the effect of deployment on reenlistment have not considered whether deployment affects married service members differently than single service members. Our study is a step toward addressing this question.

The main purpose of the study is to determine empirically if the effect of deployment on reenlistment differs depending on marital status at the time of reenlistment. A secondary but important purpose of the study is to provide a conceptual framework for explaining why the response to deployment might differ, and a third purpose is to identify future work that could be done to further understand the difference. Given that many service members have been deployed for ground operations in Iraq and Afghanistan, some more than once, our analysis will hopefully provide insight into whether, by how much, and why married members are more resilient to the pressure of deployment, at least with respect to reenlistment.

Single and married Active Component enlisted service members, the focus of our analysis, have not had the same exposure to deployment especially since 2002. A simple measure of this is the percentage with 12 or more months of deployment involving hostile duty in the 3 years prior to the reenlistment decision. In 2007, for instance, this percentage was 57% for first-term single soldiers vs. 45% for first-term married soldiers, and 40% for first-term single marines vs. 33% for first-term married marines. Differences also existed for the Navy and Air Force but were quite small. In 2007, the percentage was 3% for single first-term sailors vs. 2% for married first-term sailors, and the same for second-term sailors.

The higher percentages for the Army and Marine Corps reflect their far-greater involvement in ground combat operations in Iraq and Afghanistan relative to the Navy and Air Force. This can be seen in Fig. 14.1, which shows the number of months deployed (conditional on having been deployed) in the 36 months prior to the first-term reenlistment decision. Starting in 2004, there is a clear increase in the average months deployed in the Army and Marines Corps while the Navy and Air Force saw much smaller increases. The increases were especially large in the Army, where deployments to Iraq and Afghanistan operations were initially 12 months long and increased to 15 months in 2006. In contrast, deployments were typically 7 months long in the Marines. Figure 14.1 also shows that, on average, married soldiers and Marines spent fewer months deployed than did singles. The fact that married soldiers and marines had less exposure to extensive (12-month-plus) deployment might contribute to deployment tending to have a smaller – less positive or more negative – effect on reenlistment than for single members. Because these differences in exposure partially arise from differential sorting by marital status into occupational specialties with differing deployment rates, we therefore control for military occupational specialty, allowing us to isolate the effect of deployment on single vs. married members "within" an occupation.

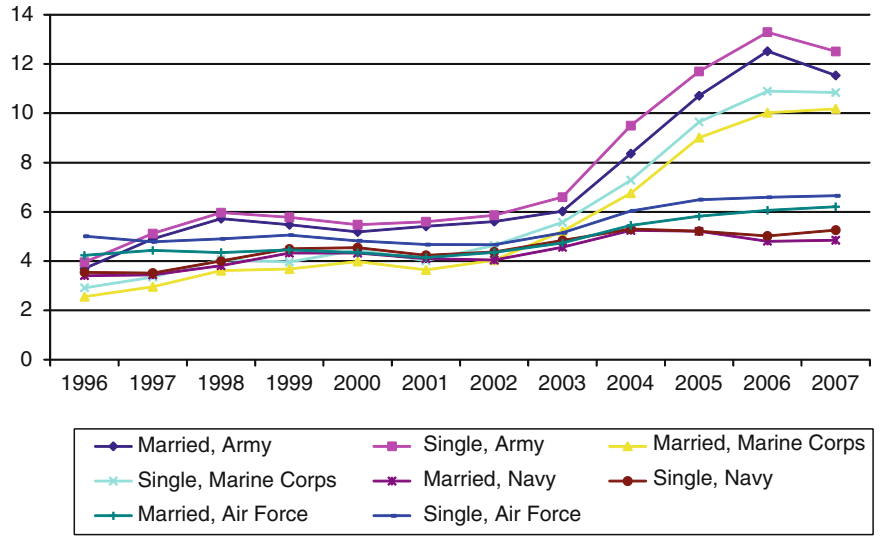

Fig. 14.1 Average months deployed in 36 months prior to reenlistment decision by marital status and service

Two key findings in our empirical analysis are that the effect of deployment is typically, but not always, positive, but this effect is larger for married members than for single members. The chief exception to the positive effect of deployment occurs in the Army in 2006 and 2007, where we find sizable negative effects for marrieds and singles. Through further analysis we attribute this negative effect to more extensive deployment of soldiers in these 2 years, i.e., to the higher cumulative months of deployment in the 3 years prior to reenlistment for soldiers with a reenlistment decision in 2006 and 2007. Our third key finding, then, is that cumulative months of deployment are critical in determining whether deployment has a positive or negative effect on reenlistment. Our fourth key finding is that although the effect of deployment is usually larger for married than for single members, the pattern of change in this effect from 1996 to 2007 is similar for married and single members.

Our data do not permit us to isolate the extent to which the difference in level, but similarity in change over time, trace to selection into marriage, support systems for single and married members, or differences in compensation and benefits. However, an argument can be made that the chief driver of the difference is selection into marriage. The basis for this argument is that the incentive to marry may be correlated with the individual's preference, or "taste," for the military and taste for deployment, and that benefits and deployment pay are higher for married members. Further, there is no reason to suppose that married members are less exposed to deployment and its risks, once military occupational specialty has been controlled. Instead, given a service member's branch of service, term of service, occupational specialty, and to some extent rank, the likelihood of deployment is independent of marital status, and our analysis controls for these factors.

The remainder of the chapter is organized as follows. We present a brief review of the literature, conceptual framework, description of our data, results from analyses of survey and administrative data, and then our conclusion.

Selected Literature

Our empirical analysis provides estimates of the effect of deployment on outcomes including higher-than-usual work stress, higher-than-usual personal stress, the intention to remain in the military, and actual reenlistment. Our brief literature review touches on studies of stress and performance in the military, the incidence of behavioral health conditions following deployment, effects on the family, and the effect of deployment on reenlistment.

Kavanagh (2005) reviews over 100 studies on stress and performance and their applicability to the military. Kavanagh identifies combat-related stressors (e.g., being ambushed or attacked, receiving hostile fire, killing enemy combatants, handling human remains, knowing someone who was injured, being injured, close quarters, civilians in the battlefield, hidden obstacles, intense firefights), environmental stressors (e.g., sanitation, lack of privacy, long work hours, heat, insects, fear of disease, lack of sleep), and family-related stressors (e.g., being away from home or family, uncertainty of return date, problems with spouse or children, financial matters at home). Stress is expected to cause perceptual narrowing leading to incomplete decisions, increased time to complete tasks, and oversimplification during problem solving. It may also lead one to yield control to others, decrease effective in-group communication, and induce groupthink. For instance, time pressures may result in focusing on fewer cues, loud noise may result in greater use of heuristics, sleep deprivation may causes decisional errors, and task overload may cause decrements in performance. However, moderate general stress has been found to increase job satisfaction, increase organizational commitment, morale, and group cooperation, whereas high general stress can reduce morale and unit loyalty. Long-term exposure to stress may lead to emotional exhaustion and burnout as well as to cardiovascular disease, muscle pain, decreased fertility, and stomach or intestinal problems. Stress exposure training is recognized as an effective means of moderating the effects of stress. This training involves three phases: the presentation of knowledge of typical stressors and reactions to stressors, the development of cognitive and problem solving skills and relaxation techniques to respond to stress, and practice in the use of the these skills when exposed to stress. In addition, group-level moderators can help to control the effects of stress. Group-level moderators include leadership skills (effective communication skills, motivation), unit cohesion, and team training, for example.

Deployment-related stress can affect behavioral health. The prevalence of "any mental health concern" in 2003–2004 was 19.1% among soldiers deployed to Iraq, 11.3% among those deployed to Afghanistan, and 8.5% among those deployed

elsewhere (Hoge, Auchterlonie, & Milliken, 2006). The prevalence of "any mental health concern" was positively related to departure from the military. About 65% of the soldiers reported any exposure to combat (Hoge et al., 2006) compared with about 90% of soldiers in 2007 (Castro, 2008). Approximately 19% of service members returning from deployment to Iraq or Afghanistan had symptoms indicative of PTSD (Tanielian & Jaycox, 2008).

Hosek, Kavanagh, and Miller (2006) find that deployment increases a service member's higher-than-usual personal stress and higher-than-usual work stress and decreases the intention to stay in the military. The effect of deployment on the member, spouse, and children (MacDermid, Samper, Schwarz, Nishida, & Nyaronga, 2008, survey and synthesize the literature) has led to interest in family resilience. Castenada et al. (2008) survey reserve spouses to learn about the challenges faced by the family when a reservist deploys and the support services needed. Savych (2008) finds that deployment reduces spousal labor force participation, more so for spouses with children under age 6. The absence of a parent on deployment may affect the emotional well-being and academic progress of children (MacDermid et al., 2008). Lyle (2006) finds that deployment causes a one-tenth of a standard deviation decrease in children's performance on standardized tests, an effect that may last for several years (Engel, Gallagher, & Lyle, 2006).

Past studies of the effect of deployment on reenlistment generally find a positive effect that diminishes as the cumulative amount of deployment time increases (Fricker, 2002; Hosek & Totten, 1998, 2002; Quester et al., 2006). These studies do not analyze whether the effect of deployment differs between single and married members.

Deployment related pay is similar for single and married service members with the exception that married members receive family separation allowance. These pays totaled approximately $800/month for single members and $1,000/month for members with dependents between 2002 and 2008 in constant 2006 dollars (Hosek & Martorell, 2009). From 1996 to 2001, they were approximately $600/month and $700/month for singles and members with dependents, respectively.

Conceptual Framework

We are interested in the effect of deployment on reenlistment and whether this effect differs between single and married service members. We first discuss the reenlistment decision of a single service member then extend the discussion to a married member, considering both the decision to marry and the decision of the married service member to reenlist. We develop the conceptual framework from an economics perspective but it has similarities to the theory of planned behavior in the field of psychology (Ajzen, 1985, 1991). We briefly state Ajzen's theory as a point of departure and then transition to our economic model.

In Ajzen's (1985, 1991) theory of planned behavior, the individual has behavioral beliefs about the consequences of an action, here reenlisting, including the occurrence of deployment and its related effects. The beliefs depend on the individual's perception of how friends, family, and other "influencers" judge this behavior (normative beliefs) and perception of social norms toward the behavior (subjective norm). Given the set of beliefs, the individual forms an attitude toward the behavior, i.e., a positive or negative evaluation of reenlisting. Based on beliefs and attitude, the individual forms a behavioral intention, and it is a precursor of actual behavior. The model allows for updating, and it recognizes that, in empirical work, intentions might not be followed by behavior if unobserved factors affecting beliefs and attitudes change after intentions are reported. An important element of the theory is control over being able to perform the behavior. However, this is not an issue here because the military gives the individual the opportunity to reenlist and the individual can choose to do so or not.

In our expected-utility model of reenlistment the individual forms an assessment of the expected utility of remaining in the military for another period vs. that of leaving. The expected utility of remaining in the military depends in part on current and future pay and on the value the individual attaches to his preference, or taste, for serving in the military. In our model the value of taste is constant over time for an individual but differs across individuals. With respect to the theory of planned behavior, taste could reflect the individual's enduring normative beliefs and subjective norm. Short-lived changes in normative beliefs, e.g., from various influencers, can be expressed in our model through the random "shock" term in each period. Our model does not explicitly relate the random term to any particular source such as an influencer. Once the individual has made an assessment of the expected utility of staying vs. that of leaving, the individual selects the higher of the two. The model does not have an intentions-formation step in the current period that precedes the action of reenlisting or leaving in that period. However, in the current period the individual can make an assessment of the expected utility of stay vs. leaving in any future period, the these future expected values could be thought of as reflecting current intentions regarding future actions. Like Ajzen's model, our model allows for updating; the individual re-optimizes in each period, given the realized circumstances of the period. Unlike Ajzen's model, our model imposes a specific structure on future uncertainty – the individual is assumed to know the distribution from which shocks are drawn. Knowing the distribution of future shocks, along with information about military pay, promotion probabilities, and civilian pay, the individual can make a current evaluation of the value of staying vs. leaving in a way that conditions on the individual acting optimally in each future period even though the specific circumstances of the future periods are not known today. In both the theory of planned behavior and our model, deployment can affect, respectively, the attitude toward, or expected utility of, remaining in the military. Deployment-related pay enters our model explicitly through a military pay term, and enters the theory of planned behavior implicitly. We now shift to the context of our model.

Reenlistment for an Unmarried Service Member

The condition for a single (i.e., unmarried) person to join or reenlist in the military is that expected utility of a term in the military is greater than or equal to expected utility outside the military as a civilian. For notation, $Vs(\mathrm{g})$ is a value function for a single person and $Vm(\mathrm{g})$ is a value function for a married person. The value of a term of service in the military for a single person equals the utility during the term plus the discounted value of the best (military or civilian) career move at the end of the term, allowing for how the training, experience, and rank gained during the term affect the career options.

$$Vs(M,S(t)) = (1-p)U(h,b) + p(EU(0,b+\upsilon d,d)+\nu)+\tau+\varepsilon + \delta E\ \mathrm{Max}(Vs(M,S(t+1)),Vs(C,S(t+1))).$$

Expected utility in the military during the term is an average of utility when not deployed and utility when deployed, where the latter allows for randomness in the length of deployment. Here, M = military, $S(t)$ = state at time t, p = probability of deployment during the term of service, h = service member time not on duty (i.e., at home), b = pay and benefits when not deployed, EU is expected utility when deployed (the expectation is taken over the random time of deployment), the zero reflects having no home time when deployed, υ = deployment pay rate per unit time, and d = deployment time. The state at time t depends on years of civilian experience, years of military experience and rank (and hence military wage), civilian wage, and marital status. The EU term includes d because the service member might derive utility directly from deployment. (It is not necessary to include a term for military duty time at home station as a direct source of utility because this is captured by time not on duty; a decrease in time not on duty is the same as an increase in time on duty.) We assume the service member has a preferred amount of deployment during the term that typically is positive but less than the full length of the term. EU is maximized when deployment time equals the preferred amount and allowing for the deployment pay that comes with deployment time. (The model can be extended to reflect the preferred amount of deployment jointly with the preferred number of deployments.) In addition, individuals differ in their preferences for the military and for deployment, and at the time of enlistment or reenlistment there may be unforeseen good or bad aspects about the military. To allow for this we add preference terms and a random shock term: τ = preference for the military, v = preference for deployment, ε = random shock, all relative to the civilian world. The $EMax$ term is the expected value of the maximum of the choice at $t+1$ between remaining in the military or leaving to become a civilian, and δ = personal discount rate. In the expression above, the state in $t+1$ accounts for the accumulation of time in the military during the term. By the same token, the state in $t+1$ also recognizes that there was no increase in civilian experience.

The value of a term's length of time in the civilian world is

$$Vs(C,S(t)) = U(h,y) + \delta E \text{ Max}(Vs(M,S(t+1)),Vs(C,S(t+1)),$$

where h=home time and y=civilian income. An individual joins the military if $V(M, S(t)) \geq V(C, S(t))$. In this expression, the state in $t+1$ registers no increase in military experience but an increase in civilian experience.

A feature of the military is that one must enter at the bottom rung of the career ladder. From the perspective of a civilian thinking about entering the military, the preceding expression is appropriate. But for someone already in the military a simpler expression may be used. The military for the most part does not permit lateral entry, though some is permitted in the first term of service. Because lateral entry is not allowed after the first term, the relevant version of the civilian alternative for a service member at reenlistment is simply

$$Vs(C,S(t)) = U(h,y) + \delta Vs(C,S(t+1).$$

By similar reasoning, anyone who wants to join the military has an incentive to do so at a young age. This is because the wage rate in the civilian world typically increases with experience in the labor force, whereas the starting wage in the military is basically the same regardless of civilian experience. As a result, the foregone civilian wage when joining the military at, say, age 26 is greater than the foregone wage at age 18, but the starting wage in the military is the same at both ages. Becoming unemployed, or the fear of becoming unemployed, can also prompt a person to consider enlisting.

Using the above equations, reenlistment occurs when $Vs(M, S(t)) \geq Vs(C, S(t))$. This outcome is more likely the higher the preference for the military, preference for deployment, random shock, military pay and benefits when not deployed, deployment pay, and the effect of a term of military service on future opportunities, $Vs(M, S(t+1))$ and $Vs(C, S(t+1))$, relative to the effect of that amount of time spent instead as a civilian.

The actual amount of deployment may differ from the preferred amount. If the typical service member wants some deployment, then having none is a disappointment. Similarly, having some deployment but much more than preferred is also a disappointment. Holding the preference for deployment constant, either too little or too much deployment decreases *EU*, the expected utility when deployed, below its optimal value. It is also possible that the service member may update the taste for deployment if the actual deployment experience is much different than expected. But note that the taste for deployment need not change for too little or too much deployment in the current term to affect the expected utility of deployment in the next term. Rather, it is only necessary for the individual to update the mean and variance of the distribution of deployment over which the expectation *EU* is calculated. For instance, extensive deployment in one term might cause a reduction in *EU* for the next term because the individual adjusts his expectation of length of deployment in the future and not because the individual's taste for deployment has changed.

Reenlistment for a Married Service Member

To extend this framework to married service members, we consider the decision to marry and the decision of a married service member to reenlist. Both decisions are relevant to our analysis because we need to consider whether selectivity into marriage affects not only reenlistment but also the effect of deployment on reenlistment for married vs. single service members. We focus on marriage during a term in the military, although the analysis can be extended to marriage before joining the military. A key question in the analysis of marriage is how to represent the preferences of the married couple. We use a joint utility function with arguments for the home time of the husband and wife, the earnings of each, and as before we include an argument for deployment time when the member is deployed. To distinguish intrinsic gains from the marriage that may differ across couples, we also include the terms α and β for the service member and the spouse, respectively, where these terms are relative to being single. We assume these gains are not affected in the short run by whether the service member is deployed or remains in the military, or whether the spouse works. As with preference for the military and preference for deployment, the value of α and β may be different for different individuals. Finally, let γ be the spouse's preference for the military and let ω be the spouse's random shock term. In the more common case where the spouse is not a service member, γ reflects tastes for the conditions frequently associated with marriage to a member of the Active Component military (e.g., living on or near a base, moving frequently, access to military family support, support for military missions).

The value of a term in the military as a married service member is

$$\begin{aligned} Vm(M,S(t)) = (1-p)U(h,w,b,e) + p(EU(0,w,b+\upsilon d,d,e)+\nu)+\tau \\ +\alpha+\varepsilon+\delta E\ \mathrm{Max}(Vm(M,S(t+1)),Vm(C,S(t+1))), \end{aligned}$$

where w = spouse time at home and e = spouse earnings. A necessary condition for the service member to marry is $Vm(M, S(t)) \geq Vs(M, S(t))$. This is not a sufficient condition because the would-be married member might meet other possible spouses who also meet this condition. Therefore, when a military couple is observed, this should be understood to mean that the spouse was the best choice among the possibilities. A similar point holds for the would-be spouse with respect to choosing whom to marry. Whether this condition holds depends on whether utility is greater for an individual as part of a couple sharing time and income and handling household chores and childrearing together, than as a single individual sharing time with others (friends, family) and handling chores alone.

Deployment adds a twist to this. A deployed service member is not physically present at home to share time and handle chores, and this is true for both single and married service members. A deployed married service member is presumably more likely to have someone back home with whom to communicate experiences and emotions, when communication is possible, yet may feel stress from absence and not being able to help solve problems, take care of chores, take part in family events such as births, birthdays, holidays, and graduations, or help if family

members become ill or disabled, and may not want to share stressful information from military operations. As before, the state in $t+1$ shows an increase in military experience and no increase in civilian experience.

Let W (rather than V) designate the spouse's value function, Y designate the spouse's utility function, and assume the spouse is a civilian. The spouse's value of being single or married to a service member is, respectively,

$$Ws(C,S(t)) = Y(w,e) + \delta Ws(C,S(t+1)),$$
$$Wm(C,S(t)) = (1-p)Y(h,w,b,e) + pEY(0,w,b+\upsilon d,e) + \delta Wm(C,S(t+1)) + \beta + \gamma + \omega.$$

This formulation for the value to marriage omits any spouse preference for deployment, though one could be included. A necessary condition for the spouse to marry a service member is $Wm(C, S(t)) \geq Ws(C, S(t))$. Marriage is more likely the higher the spouse's utility, which depends on utility when the member is home and spends h fraction of the time at home and earns b, and utility when the member is deployed and spends no time at home and earns b + υδ. The spouse's utility is also affected by employment opportunities as a military spouse. Because military life involves frequent relocations and sometimes living in areas far from urban areas with richer employment opportunities, it may be harder for a military spouse to find a job and the wage may be lower, but offsetting this to some extent are the benefits available in the military (as discussed further below). Also, the spouse's employment experience while the couple is in the military might affect the spouse's future earnings, as reflected through $Wm(C, S(t+1))$. Finally, marriage is more likely the higher the spouse's intrinsic gain from marriage, β, and preference for the military, γ. It is also possible that the random draw ω differs between being single and being married (and living on or near a base).

Comparing Reenlistment for Unmarried and Married Service Members

We now compare the reenlistment conditions for a single vs. a married service member. Drawing together the above expressions, a single member reenlists if

$$(1-p)U(h,b) + p(EU(0,b+\upsilon d,d) + \nu) + \tau + \varepsilon + \delta E \operatorname{Max}(Vs(M,S(t+1)), Vs(C,S(t+1))) \geq U(h,y) + \delta Vs(C,S(t+1)).$$

Assuming a couple stays married, a married member reenlists if

$$(1-p)U(h,w,b,e) + p(EU(0,w,b+\upsilon d,d,e) + \nu) + \tau + \alpha + \varepsilon + \delta E \operatorname{Max}(Vm(M,S(t+1)), Vm(C,S(t+1))) \geq U(h,w,y,e) + \alpha + \delta Vm(C,S(t+1))$$

and the spouse is willing for the member to stay in the military if

$$(1-p)Y(h,w,b,e)+pEY(0,w,b+\upsilon d,e)+\delta Wm(C,S(t+1))$$
$$+\beta+\gamma+\omega \geq Y(h,w,y,e)+\delta Wm(C,S(t+1))+\beta.$$

Deployment causes several effects for *any* service member, single or married. It reduces time at home station, which reduces utility (though probably not for everyone); increases time deployed, which may at least initially increase utility; and increases deployment-related pay, which increases utility. The amount of deployment matters as well. Too little or too much reduces utility relative to expected utility, and this might lead to a revision in expected deployment in the future, affecting future expected utility from deployment. In addition to one's own recent deployment experience, new information available at time t about deployment could affect current and future expected utility from deployment.

The effect of deployment may differ for a married service member, however, because the member's utility is joint with the time and earnings of the spouse and deployment pay is higher for a married member than for a single member. Further, deployment exerts an effect on the spouse's utility. When the member deploys, the spouse will adjust hours of work (and earnings) to maximize utility over the course of the deployment. For instance, this might mean more purchased services such as prepared food, baby sitting, house cleaning, and home maintenance, with deployment pay helping to pay for these services, and a decrease in hours of work to spend more time in activities with children. Another aspect is that new information about deployment will also affect the spouse's expected utility from deployment. An increase in expected deployment might increase the member's expected utility but decrease the spouse's expected utility, for example. The member might prefer to stay in the military and the spouse might prefer the member to leave. The extent to which such "negative" surprises occur depends on how well the spouse is informed about deployment and its consequences when making the decision to marry the service member, and the role of new information about deployment that might cause a downward revision in expected utility. If the spouse is well informed and anticipated future deployment remains the same, then there may be little difference in the effect of deployment on the reenlistment of single vs. married service members.

As a thought experiment, suppose the impact of deployment on the value of remaining in the military was negative but the same for single and married service members. The effect of deployment on reenlistment nevertheless could differ if, for instance, the ex ante value of remaining in the military were on average higher for married members. This value could be higher if military benefits, especially health benefits, are worth more to married members, and because of selection into marriage. The average taste for military service might be higher for married members. The higher utility of being in the military among marrieds provides a "buffer" to any negative utility effect of deployment. A single member thinking about marriage and not intending to stay in the military would prefer to postpone marriage until after leaving, rather than trying to find a spouse who, despite desiring to marry a

civilian, is willing to be a military spouse for a short time and to cope with relocation after leaving the military. By comparison, a single member thinking about marriage and intending to stay in the military does not have the same reason to postpone marriage. Further, under the theory of marriage (Becker, 1973, 1974), assortative mating tends to occur with "likes marrying likes," and a member with a high taste for the military will tend to marry a spouse with a high taste for the military. Related to the latter, a military spouse can expect lower earnings and employment than if the spouse were married to a civilian, and so we expect the spouse's preference for the military to be sufficiently high to compensate for this given that the spouse chose to marry into the military.

Data

We use data from two sources, both from the Defense Manpower Data Center. The first source consists of the Status of Forces Surveys of Active-Duty Personnel from 2002 to 2005. These 10 cross-sectional surveys were administered online and had response rates of 30–35% on a sample frame of about 35,000, resulting in samples sizes of about 10,000 per survey. The second source is the "proxy PERSTEMPO" administrative data file, a longitudinal file of all Active Component personnel that contains information on years of service, rank, military occupational specialty, deployment, and demographics including age, education, gender, race/ethnicity, marital status. Our analysis focuses on enlisted personnel stratified by branch of service.

We received permission to link the survey responses to the administrative data file, which enabled us to include information on deployment over 3 years prior to reenlistment (the survey refers only to the previous 12 months), determine whether the deployment involved hostile duty (the survey refers only to "time away"), and observe actual reenlistment subsequent to the survey (the survey asks about the intention to stay). The proxy PERSTEMPO data are for fiscal 1996 to fiscal 2007. Virtually all respondents in the surveys from 2002 to 2003 had made a reenlistment decision by the end of fiscal 2007, and many but not all of the respondents in the 2004–2005 surveys had done so. Our regression analysis of reenlistment in the linked survey data includes only those respondents for who a reenlistment decision was observed. We also obtained the administrative pay file corresponding to the years of our PERSTEMPO file. We used the pay file to create a variable on the reenlistment bonus, if any, available to a service member at the time of reenlistment, and linked this information to the member's record in the PERSTEMPO file.

In sum, we use two data sets in our empirical analysis: 2002–2005 Status of Forces Survey data for Active Component enlisted personnel at first-term or second-term-or-higher reenlistment to which administrative data (from personnel records and pay data) have been linked; and 1996–2007 administrative data on the *entire* population of enlisted service members at first- and second-term reenlistment.

Empirical Method

We analyze four binary outcomes in the survey data and one in the administrative data. The survey outcomes are self-reported higher-than-usual work stress, higher-than-usual personal stress, intention to reenlist, and actual reenlistment, and the outcome in the administrative data is actual reenlistment.

The question for work stress was, "Overall, how would you rate the current level of stress in your work life?" We defined "higher than usual work stress" as an endorsement of either of the following responses from a five-response Likert scale: "more than usual" or "much more than usual." We defined "higher than usual personal stress" similarly. Intention to reenlist was coded from the responses of "likely" or "very likely" to the question, "Suppose that you have to decide whether to stay on active duty. Assuming you could stay, how likely is it that you would choose to do so?" We define actual reenlistment as an increase of 2 years or more in obligated service recorded on the respondent's administrative record. A service member may decide to extend a current term of service, and if so we follow the service member until the reenlistment decision, as indicated by departure from service or an increase of 2 or more years of obligated service. The percentages with a positive response for each dependent variable are shown in Table 14.1.

These percentages are in a range such that the results from linear probability regressions estimated by ordinary least squares are much the same as those from nonlinear methods such as probit or logistic regression (Wooldridge, 2001). As a result, we estimate linear probability regressions given their ease of interpretation. The tables of coefficients below are deployment effects from linear probability regressions. A coefficient of, say, 0.05, has the interpretation that a unit change in the explanatory variable – e.g., a "1" for having hostile deployment vs. a "0" for no hostile deployment – leads to a 5% increase in the dependent variable.

We use different definitions of deployment in the course of the analysis. Throughout, we distinguish between deployments involving hostile duty or not. Our

Table 14.1 Percentage with positive response

	Survey data				Administrative data
	Higher-than-usual work stress	Higher-than-usual personal stress	Intention to stay in military	Reenlist	Reenlist
First term					
Army	0.58	0.50	0.34	0.41	0.35
Navy	0.57	0.44	0.45	0.44	0.43
Marines	0.56	0.48	0.32	0.28	0.24
Air Force	0.48	0.36	0.49	0.53	0.53
Second term					
Army	0.51	0.45	0.62	0.51	0.64
Navy	0.48	0.39	0.71	0.52	0.57
Marines	0.44	0.41	0.72	0.61	0.58
Air Force	0.49	0.36	0.74	0.67	0.68

main interest is in deployment involving hostile duty; every regression also contains an indicator of nonhostile deployment as a control variable. For deployment involving hostile duty, we first use an indicator of deployment with hostile duty in the year prior to the reenlistment decision, and in later specifications we use indicators for 1–11 months, and 12 or more months, of hostile deployment in the 3 years preceding reenlistment. The regressions include many controls and they are listed in a note to the tables. The full set of regression results is available from the authors on request.

Empirical Results

We present results for all four services, but our discussion concentrates on the Army and Marines as they have had the largest burden of deployments to Iraq and Afghanistan. We focus on the first-term reenlistment decision for brevity but also report results for the second-term reenlistment decision. The tables present deployment coefficients for single and married members, a standard deviation and indication of statistical significance for each coefficient, and a *p*-value for the null hypothesis that the single and married deployment effect coefficients are equal. Our survey data regressions are unweighted, although exploratory analysis comparing weighted to unweighted regressions indicated little difference. Finally, the occurrence of deployment is assumed to be exogenous. We use observed deployment, and we do not use an instrumental variable for deployment. This approach is consistent with the finding that conditional on service and occupation, deployments are quasi-randomly assigned (Lyle, 2006; Savych, 2008).

We begin by reporting findings from the analysis of the Status of Forces survey. Tables 14.2 and 14.3 provide estimates of effects of hostile deployment in the previous 12 months for first-term and second-term-plus survey respondents. The results for first-term show that work stress is significantly related to hostile deployment for all services except the Air Force, but these effects do not differ significantly by marital status (either in a statistical or quantitative sense). Hostile deployments also increase the likelihood of having higher than usual personal stress. Consistent with the idea that deployments contribute to stress in a marital relationship, the effect for marrieds is substantially larger than it is for singles in the Army (increases of 10.4% and 4.6%, respectively). The effect for Marines is also larger for marrieds, but the married-single contrast is not statistically significant.

Despite the fact that personal stress increases more for deployed marrieds than singles, the results for first-term also suggest that hostile deployment has a higher effect on intention to stay and reenlistment for marrieds. Overall, hostile deployment tends to reduce intentions to reenlist, but the magnitude of the reduction is significantly larger for singles in the Army and Marines Corps. Similarly, the results for actual reenlistment show that deployment has significant negative effects for the Army and Marines Corps for singles. For marrieds in the Army, deployment also has a negative, but smaller effect, and for the Marines it is actually positive although small in magnitude and not statistically significant.

Turning to the results for the full administrative data in Table 14.4 where we pool all decisions made between 2002 and 2007, we again see that deployments

Table 14.2 Effects of deployment using status of forces survey data, first term

	Army	Navy	Marines	Air Force
	Higher-than-usual work stress			
Married	0.118[c]	0.074[b]	0.023	–0.010
	(0.022)	(0.026)	(0.030)	(0.026)
Single	0.112[c]	0.076[c]	0.055[a]	–0.024
	(0.021)	(0.020)	(0.023)	(0.024)
p-value for married = single	0.831	0.946	0.364	0.673
	Higher-than-usual personal stress			
Married	0.104[c]	0.060[a]	0.033	0.024
	(0.022)	(0.028)	(0.030)	(0.025)
Single	0.046[a]	0.067[b]	0.022	0.020
	(0.021)	(0.020)	(0.023)	(0.023)
p-value for married = single	0.034	0.822	0.753	0.920
	Intention to reenlist			
Married	–0.077[c]	–0.026	–0.060[a]	–0.082[b]
	(0.020)	(0.026)	(0.028)	(0.025)
Single	–0.126[c]	–0.055[b]	–0.114[c]	–0.044[a]
	(0.019)	(0.020)	(0.020)	(0.024)
p-value for married = single	0.047	0.364	0.093	0.243
	Actual reenlistment			
Married	–0.052[a]	0.027	0.016	0.050[a]
	(0.025)	(0.030)	(0.030)	(0.028)
Single	–0.097[c]	–0.015	–0.064[b]	0.013
	(0.025)	(0.024)	(0.021)	(0.028)
p-value for married = single	0.160	0.249	0.019	0.329

Notes: The table shows estimates from linear probability models estimated separately by service branch. The models include the following controls: having only non-hostile deployment, spending more than one night away from home without being deployed, how prepared the respondent feels to carry out his or her job, Armed Forces Qualification Test (AFQT) category, location (rural or urban), education, race, a marital status "main effect," whether the respondent is in a dual-service marriage, gender, survey wave indicator variables, one-digit DoD occupational specialty fixed effects, years of service, and pay grade

Key: [a]significant at 0.1; [b]significant at 0.01; [c]significant at 0.001

tend to have a larger (more positive) effect for married service members. For all services, deployment has a negative effect on reenlistment among singles. The magnitude of these effects is modest; about 1% for the Army and Marines. On the other hand, deployments have a positive effect on the reenlistment of married individuals. In the Army, this effect is also small (1.2%), while it is nearly 5% for Marines. All of the married-single contrasts are statistically significant, but it should be borne in mind that this is partially a function of the large sample sizes.

The estimates in Table 14.4 that pool across years are instructive, but they do not shed light on how the effects of deployment changed as the exposure to deployment shot up in recent years. To address this issue, we estimated the models separately by year of decision. Figure 14.2 plots the estimated coefficient on being deployed in the 12 months prior to the decision, at first-term reenlistment by marital status. Because of the large number of observations in the administrative data and fairly higher percentages deployed, practically all of the deployment coefficients

Table 14.3 Effects of deployment using status of forces survey data, second term

	Army	Navy	Marines	Air Force
	Higher-than-usual work stress			
Married	0.102[c]	0.127[c]	0.059[b]	0.027
	(0.013)	(0.016)	(0.021)	(0.017)
Single	0.087[c]	0.122[c]	0.039	0.005
	(0.020)	(0.022)	(0.035)	(0.025)
p-value for married = single	0.492	0.843	0.607	0.453
	Higher-than-usual personal stress			
Married	0.097[c]	0.054[c]	0.050[b]	0.039[b]
	(0.013)	(0.016)	(0.021)	(0.016)
Single	0.080[c]	0.006	–0.003	0.007
	(0.020)	(0.022)	(0.034)	(0.023)
p-value for married = single	0.415	0.072	0.156	0.234
	Intention to reenlist			
Married	–0.050[c]	0.027[a]	–0.020	–0.031[a]
	(0.012)	(0.012)	(0.018)	(0.014)
Single	–0.054[b]	0.006	0.029	–0.050[a]
	(0.019)	(0.021)	(0.032)	(0.023)
p-value for married = single	0.868	0.376	0.156	0.471
	Actual reenlistment			
Married	0.031[a]	0.126[c]	0.080[c]	0.044[b]
	(0.015)	(0.018)	(0.023)	(0.017)
Single	–0.014	0.111[c]	0.081[a]	0.010
	(0.025)	(0.029)	(0.040)	(0.031)
p-value for married = single	0.092	0.648	0.978	0.322

Notes: See Table 14.2 for list of additional covariates included in these regressions
Key: [a]significant at 0.1; [b]significant at 0.01; [c]significant at 0.001

are statistically significant and the confidence bands are not shown. For the Army prior to 2005, deployment had a positive effect for both marrieds and singles, and the size of these effects was larger for married service members. Recently, however, there was a sharp decline in the deployment effects. In 2006, the effects were negative and sizable for both groups. Perhaps more interesting is that the negative effect for marrieds exceeded that for singles, reversing the pattern seen since 1996. This result is also noteworthy since our measures of deployment exposure peak in 2006. In 2007, the effect rebounds somewhat for marrieds and is again greater than that for singles, but it remains negative and statistically significant.

The results for Marines differ from those in the Army. The effect of deployment is always larger for marrieds, and this gap remains fairly similar over time (about 5%). In most years, the effect for singles is negative but small in magnitude. Moreover, the sharp fall in the effects in 2006 seen for the Army is not apparent for the Marines. In fact, the coefficients grow in 2006 and 2007. In the Air Force and Navy, which both saw much less combat than the Marines or Army, the effects of deployment show few trends and the effects for marrieds are consistently above those for singles.

The results in Fig. 14.2 beg the question of why the deployment effects for the Army fall so sharply in 2006 and to a lesser extent in 2007. One possible explanation

Table 14.4 Effects of deployment using administrative data, 2002–2007

	Army	Navy	Marines	Air Force
	First term			
Nonhostile deployment only	0.037[c]	0.069[c]	0.032[c]	0.117[c]
	(0.006)	(0.005)	(0.005)	(0.007)
Hostile deployment: married	0.012[b]	0.036[c]	0.048[c]	0.042[c]
	(0.004)	(0.005)	(0.004)	(0.005)
Hostile deployment: single	–0.010[c]	–0.027[c]	–0.008[b]	–0.022[c]
	(0.003)	(0.003)	(0.003)	(0.005)
p-value for Single = married	0.000	0.000	0.000	1.00
	Second term			
Nonhostile deployment only	0.083[c]	0.147[c]	0.111[c]	0.073[c]
	(0.005)	(0.005)	(0.009)	(0.007)
Hostile deployment: married	0.030[a]	0.082[c]	0.093[c]	0.040[c]
	(0.004)	(0.005)	(0.008)	(0.005)
Hostile deployment: single	–0.008	–0.005	0.031[b]	0.011
	(0.005)	(0.006)	(0.012)	(0.008)
p-value for single = married	99,082	79,270	28,478	47,647
	0.000	0.000	0.000	0.002

Note: Table shows regression coefficients on deployment variables. Separate models are estimated by service branch and also first/second term. The models also include controls of DoD three-digit occupational specialty-by-quarter fixed-effects, years of service at the time of the decision, education, gender, Armed Forces Qualification Test (AFQT) category, race, being promoted more rapidly than is typical, and year-of-decision indicators

Key: [a]significant at 0.1; [b]significant at 0.01; [c]significant at 0.001

is that the effect of deployment is more negative when a service member has many months deployed, coupled with the fact that in 2006 the average months spent on deployment was highest. To examine this hypothesis, we estimated the deployment effects separately by whether the individual spent less than 12 months on deployment or 12 or more months in the 36 months preceding the reenlistment decision.

Figure 14.3 plots the estimated deployment effects over time for at first-term reenlistment by marital status and months spent deployed. For the Army, the coefficients for married individuals who spent 1–11 months deployed are consistently above those for singles who also had 1–11 months deployed. However, the effect of deployment for those who had 12 or more months deployed is not very different for marrieds and singles, and the effect for marrieds is sometimes below that for singles (notably in 2006). Thus, part of the reason why the effects for marrieds are higher than for singles is that singles who are deployed are more frequently in the 12+ month group. For the Marines, we again see that the effect of deployment for singles is below that for marrieds among those with 1–11 months of deployment. For those with 12 or more months of deployment, this pattern also holds except in 2002. In contrast to the results for the Army and Air Force, the results do not differ substantially by whether the member spent 1–11 or 12 or more months on deployment; the more pronounced difference is between the effects for marrieds and singles.

Finally, we examined whether marrieds or singles respond differently to reenlistment bonuses. Since married service members have dependents, cash reenlistment

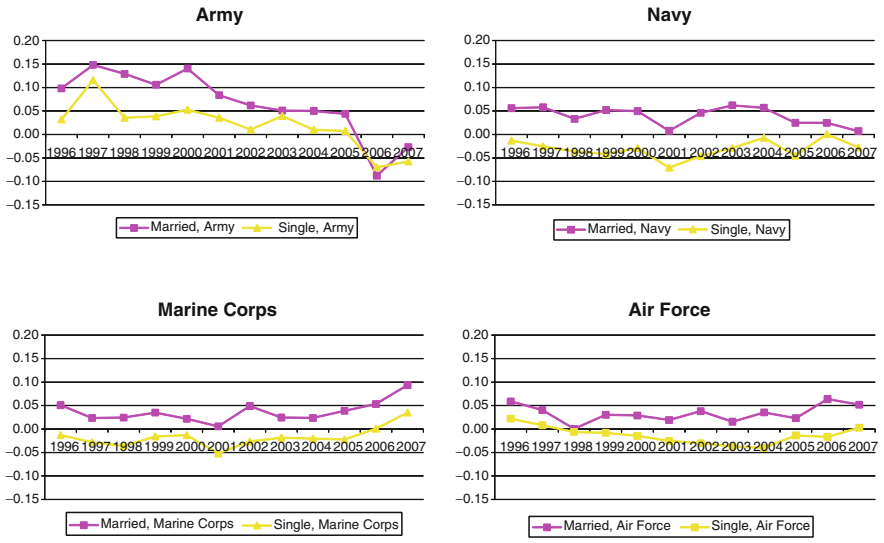

Fig. 14.2 Effect of deployment in 12 months prior to decision on first-term reenlistment by year of decision, by service and marital status

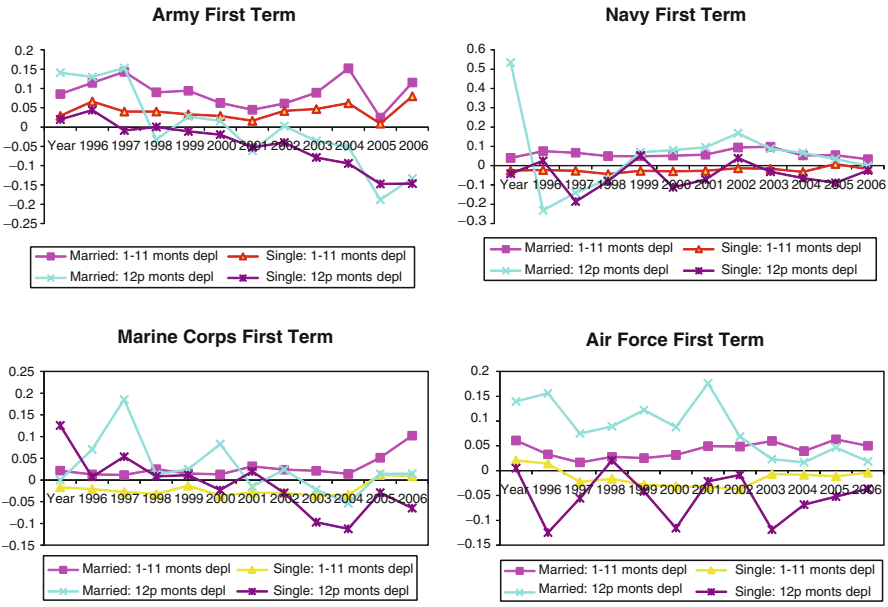

Fig. 14.3 Differential effect of deployment in 36 months prior to decision on first-term reenlistment by months deployed and marital status

bonuses might have a larger effect for this group. The results in Table 14.5 provide some indication that this is the case. For first-term members, the effect of the reenlistment bonus multiplier is positive and statistically significant for both married and

Table 14.5 Bonus effects using administrative data, 2002–2007

	Army	Navy	Marines	Air Force
	First term			
Nonhostile deployment only	0.037[c]	0.069[c]	0.032[c]	0.117[c]
	(0.006)	(0.005)	(0.005)	(0.007)
Hostile deployment: married	0.012[b]	0.036[c]	0.048[c]	0.042[c]
	(0.004)	(0.005)	(0.004)	(0.005)
Hostile deployment: single	–0.010[c]	–0.027[c]	–0.008[c]	–0.022[c]
	(0.003)	(0.003)	(0.003)	(0.005)
p-value for single = married	0.000	0.000	0.000	1.00
	Second term			
Nonhostile deployment only	0.083[c]	0.147[c]	0.111[c]	0.073[c]
	(0.005)	(0.005)	(0.009)	(0.007)
Hostile deployment: married	0.030[c]	0.082[c]	0.093[c]	0.040[c]
	(0.004)	(0.005)	(0.008)	(0.005)
Hostile deployment: single	–0.008	–0.005	0.031[b]	0.011
	(0.005)	(0.006)	(0.012)	(0.008)
p-value for single = married	99,082	79,270	28,478	47,647
	0.000	0.000	0.000	0.002

Note: Table shows regression coefficients on reenlistment bonus multiplier variables. Separate models are estimated by service branch and also first/second term. The models also include controls of DoD three-digit occupational specialty fixed-effects, years of service at the time of the decision, education, gender, Armed Forces Qualification Test (AFQT) category, race, being promoted more rapidly than is typical, and year-of-decision indicators
Key: [a]significant at 0.1; [b]significant at 0.01; [c]significant at 0.001

single service members, for all services. These effects are larger for marrieds than for singles except in the Navy, and these differences are statistically significant. However, they are not very large in magnitude. For instance, in the Army, a one-unit increase in the selective reenlistment bonus (SRB) multiplier increases the likelihood of reenlisting by 3.5% for marrieds and 2.9% for singles (a 21% difference). At second term, the patterns are largely the same, although now the estimates are significantly larger for marrieds only in the Navy and in the Air Force. (The covariates included in these regressions are the same as for Table 14.4, except these models control for DoD three-digit occupational specialty fixed-effects rather than three-digit occupational specialty-by-quarter effects. Since bonuses do not vary within occupation at a given point in time, bonus effects are not identified in that model).

Conclusion

Deployments place stress not only on the deployed service member but also on spouses and other family members left at home. The recent high pace of deployments to Iraq and Afghanistan have raised concerns about the impact these missions have had on the wellbeing of service members and their families, especially in the Marine Corps and Army, where the increase in deployment exposure was the greatest. In this

chapter, we examined the effect of deployment on "quality of life" measures such as the incidence of high work and personal stress as well as on the decision to remain in the military, paying close attention to how these effects differ by marital status.

The findings suggest that deployment has a stronger effect on the likelihood of reporting higher than usual personal stress in the Army, but when it comes time to make a decision about whether to leave the military deployment actually has a larger positive effect on reenlistment for marrieds than for singles.

Why does deployment tend to increase the reenlistment rate for married service members more than for singles even though there is some evidence that deployments have a greater effect on personal stress for marrieds? There are many possible explanations, but a second contribution of this paper is the development of a simple model that suggests an important role for self-selection into the military for explaining our results. In particular, if service members marry while in the military, it is plausible that they have higher "taste" for military life and deployment than do singles. This may be because of assortative mating on tastes for the military (i.e., individuals willing to marry into a military family will tend to have higher overall taste for the military, and marry individuals in the military who also have high taste for serving in the military). This type of self-selection implies that any negative effect of deployment on utility is relatively less likely to make military life on net less desirable than civilian life. If taste for deployment is correlated with taste for the military, which is consistent with assortative mating, then we can expect to see marrieds responding more positively (less negatively) to deployment. Yet another explanation is that marrieds value the additional pay associated with deployment more than singles, perhaps due to the need to support dependents. However, the additional pay, which comes through the family separation allowance, is currently $250/month or $3,000 for 12 months of deployment. Assuming that income is sheltered from tax by the combat zone tax exclusion, it would nevertheless be a small fraction of future military income for a service member thinking of reenlisting for a 3- or 4-year hitch, and therefore its role in explaining the higher effect of deployment on reenlistment for marrieds than for singles seems small.

While our empirical findings lay out interesting patterns that are consistent with these conjectures, we have no evidence directly on the service member's and spouse's tastes for military life and deployment. Learning more about the selection into marriage with a service member and about how military marrieds vs. singles cope with deployment may be a fruitful area for future research. Although our focus has been on reenlistment, the broader topic is family resilience throughout the deployment cycle. Finally, granted a differentially higher response to deployment for marrieds than for singles, one is still struck by the overall similarity in their patterns of response. This suggests that the current policy emphasis on the military family, while well placed, should be extended to include "families" of one, i.e., single service members.

Appendix

See Tables 14.6–14.8.

Table 14.6 Descriptive statistics for administrative data sample (first term)

	Army		Navy		Marines		Air Force	
	Married	Single	Married	Single	Married	Single	Married	Single
Reenlisted	0.44	0.28	0.54	0.44	0.33	0.20	0.64	0.49
Nonhostile deployment only, prior 12 months	0.08	0.01	0.23	0.03	0.20	0.01	0.09	0.01
Hostile deployment, prior 12 months	0.49	0.56	0.35	0.43	0.46	0.54	0.25	0.31
Selective reenlistment bonus (SRB) multiplier	0.98	0.94	1.52	1.54	1.07	1.11	1.53	1.61
Years of service	4.30	3.96	4.32	4.26	4.20	4.20	4.86	4.61
HS dropout or education missing	0.02	0.01	0.03	0.02	0.00	0.00	0.00	0.00
GED	0.10	0.09	0.08	0.06	0.04	0.03	0.00	0.00
At least some college	0.18	0.13	0.11	0.08	0.06	0.04	0.11	0.09
Male	0.82	0.87	0.82	0.83	0.92	0.95	0.73	0.74
AFQT below category IIIB or missing	0.02	0.01	0.00	0.00	0.01	0.01	0.00	0.00
AFQT category IIIB	0.28	0.28	0.40	0.39	0.34	0.30	0.23	0.23
AFQT category II	0.36	0.36	0.28	0.30	0.34	0.37	0.42	0.42
AFQT category I	0.05	0.05	0.02	0.03	0.03	0.04	0.05	0.06
White	0.61	0.63	0.54	0.56	0.68	0.71	0.72	0.69
Black	0.20	0.19	0.21	0.21	0.11	0.11	0.15	0.19
Promoted rapidly	0.66	0.65	0.50	0.50	0.77	0.78	0.84	0.85

Note: All variables listed are "0–1" indicator variables except years of service and the SRB multiplier. Cell entries represent sample means. The standard deviation for a "0–1" indicator variable can be computed from the mean as the square root of mean (1 – mean)

Table 14.7 Descriptive statistics for survey data sample (first term)

	Army		Navy		Marines		Air Force	
	Married	Single	Married	Single	Married	Single	Married	Single
Intend to reenlist	0.38	0.29	0.51	0.41	0.35	0.29	0.53	0.44
Higher than usual work stress	0.59	0.57	0.58	0.57	0.58	0.55	0.50	0.47
Higher than usual personal stress	0.53	0.47	0.49	0.41	0.49	0.47	0.38	0.34
Actual reenlistment	0.44	0.36	0.50	0.39	0.33	0.25	0.58	0.48
Nonhostile deployment only	0.18	0.01	0.23	0.01	0.24	0.01	0.12	0.01
Hostile deployment	0.32	0.34	0.29	0.30	0.26	0.29	0.20	0.22
Away from home but not deployed	0.44	0.38	0.37	0.33	0.43	0.40	0.34	0.29
Very poorly prepared for job	0.04	0.04	0.03	0.02	0.03	0.02	0.01	0.01
Poorly prepared for job	0.08	0.10	0.05	0.05	0.06	0.05	0.05	0.04
Well prepared for job	0.42	0.44	0.47	0.51	0.43	0.47	0.48	0.51
Very well prepared for job	0.29	0.24	0.30	0.25	0.35	0.31	0.31	0.29
AFQT category I	0.08	0.10	0.05	0.06	0.05	0.07	0.05	0.06
AFQT category II	0.37	0.40	0.34	0.36	0.41	0.46	0.44	0.45
AFQT category IIIA	0.27	0.27	0.26	0.25	0.27	0.26	0.28	0.28
AFQT category IIIB	0.24	0.20	0.32	0.31	0.24	0.20	0.20	0.20
Rural location	0.03	0.01	0.01	0.01	0.02	0.01	0.09	0.07
Micropolitan area	0.11	0.11	0.11	0.10	0.20	0.17	0.07	0.08
Metropolitan area	0.65	0.50	0.77	0.47	0.72	0.60	0.64	0.60
Some college	0.03	0.02	0.02	0.01	0.02	0.01	0.22	0.13
College graduate	0.10	0.08	0.04	0.02	0.01	0.01	0.01	0.02
Black	0.21	0.22	0.17	0.20	0.12	0.12	0.16	0.23
Hispanic	0.19	0.16	0.20	0.12	0.19	0.16	0.08	0.06
Other race	0.07	0.09	0.16	0.16	0.06	0.07	0.09	0.09
Dual career spouse	0.22	0.00	0.23	0.00	0.27	0.00	0.35	0.00
Male	0.76	0.72	0.76	0.71	0.73	0.80	0.71	0.70

See note to Table 14.6

Table 14.8 Glossary of explanatory variables

Variable	Description
Nonhostile deployment only in window	1 if deployed in 12- or 36-month window but did not receive hostile fire pay (HFP), 0 otherwise
Hostile deployment in window	1 if received HFP in 12 month or 36 month window
SRB multiplier	Average bonus multiplier in an respondent's DoD three-digit occupation and zone at the time of the reenlistment decision
Years of service	Years of active-duty military service
HS dropout or education missing	1 if respondent has less than a HS diploma or the education information is missing, 0 otherwise
GED	1 if respondent has a General Educational Development (GED) degree, 0 otherwise
At least some college	1 if respondent has at least some college education, 0 otherwise
Male	1 if respondent is male, 0 otherwise
Armed Forces Qualification Test (AFQT) less than category IIIB	1 if AFQT percentile below 31st percentile
AFQT category IIIB	1 if AFQT percentile between 31st and 49th percentile
AFQT category II	1 if AFQT percentile between 65th and 92nd percentile
AFQT category I	1 if AFQT percentile above 92nd percentile
White, Black, Hispanic, or other	1 if respondent is member of given racial group
Promoted rapidly	1 if pay grade is higher than the average pay grade for members with the same years of service at the time of the reenlistment decision
Away from home but not deployed	1 if respondent spent any nights away from usual duty location in 12 months prior to survey, but not deployed, 0 otherwise
Very poorly prepared for job duties	1 if respondent indicated that he or she was very poorly prepared for his or her wartime job duty, 0 otherwise
Poorly prepared for job duties	1 if respondent indicated that he or she was poorly prepared for his or her wartime job duty, 0 otherwise
Well prepared for job duties	1 if respondent indicated that he or she was well prepared for his or her wartime job duty, 0 otherwise
Very well prepared for job duties	1 if respondent indicated that he or she was very well prepared for his or her wartime job duty, 0 otherwise

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